

WHAT IS CLAIMED IS

1. A pressure-sensitive adhesion sheet [for a silicone oxide containing material], which comprises a foamed base material having formed on at least one surface thereof a layer composed of an acrylic pressure-sensitive adhesive comprising a copolymer comprising:

(a) 60 to 94% by weight of an acrylic monomer represented by formula (1a):  
 $\text{CH}_2 = \text{C}(\text{R}^1) \text{COOR}^2$  wherein  $\text{R}^1$  is a hydrogen atom or a methyl group; and  $\text{R}^2$  is an alkyl group having 4 to 14 carbon atoms,

(b) 5 to 40% by weight of a (meth) acrylamide represented by formula (2a):  
 $\text{CH}_2 = \text{C}(\text{R}^3) \text{CONR}^4\text{R}^5$  wherein  $\text{R}^3$  is a hydrogen atom or a methyl group;  $\text{R}^4$  is a hydrogen atom or an alkyl group; and  $\text{R}^5$  is an alkyl group or an organic group which is bonded to  $\text{R}^4$  to form a hetero ring together with a N atom, and

(c) 1 to 10% by weight of a monomer having an acidic group, each based on the total content of components a), b) and c),

wherein the foamed base material has a water absorption rate less than 15% by weight after having been immersed in warm water having a temperature of 40°C for 24 hours.

2. The pressure-sensitive adhesion sheet [for a silicone oxide containing material] of claim 1, wherein the (meth) acrylamide represented by formula (2a) is selected from the group consisting of N-methylacrylamide, N,N-dimethylacrylamide, N-isopropylacrylamide, N,N-diethyl (meth) acrylamide, N,N-dibutyl (meth) acrylamide, N-(meth) acryloylmorpholine, N-(meth) acryloylpyrrolidone, N-(meth) acryloylpiperidine, N- (meth) acryloylpyrrolidine, and N- (meth) acryloyl-4-peperidone.

3. The pressure-sensitive adhesion sheet [for a silicone oxide containing material] of claim 1, wherein the monomer having an acidic group is a carboxyl-containing monomer or a phosphoric group-containing monomer.

4. A pressure-sensitive adhesion sheet [for a silicone oxide containing material], which comprises a plastic film formed on at least one surface thereof a layer composed of an acrylic pressure-sensitive adhesive comprising a copolymer comprising:

(a) 60 to 95% by weight of an acrylic monomer represented by formula (1b):

$\text{CH}_2 = \text{C}(\text{R}^1) \text{COOR}^2$  wherein  $\text{R}^1$  is a hydrogen atom or a methyl group; and  $\text{R}^2$  is an alkyl group having 4 to 12 carbon atoms,

(b) 5 to 40% by weight of a N,N-disubstituted (meth) acrylamide represented by formula (2b):  $\text{CH}_2 = \text{C}(\text{R}^3) \text{CONR}^4 \text{R}^5$  wherein  $\text{R}^3$  is a hydrogen atom or a methyl group;  $\text{R}^4$  and  $\text{R}^5$  are alkyl groups or organic groups which are bonded to each other to form a hetero ring together with a N atom, and

(c) 0 to 10% by weight of a monomer having an acidic group, each based on the total content of components a), b) and c),

wherein the plastic film has a water vapor permeability of 500g or less /m<sup>2</sup>/24 hours.

5. The pressure-sensitive adhesion sheet [for a silicone oxide containing material] of claim 4, wherein a gel percentage of the copolymer is 50 to 95% by weight.

6. The pressure-sensitive adhesion sheet [for a silicone oxide containing material] of claim 4, wherein the (meth) acrylamide represented by formula (1b) is selected from the group consisting of butyl (meth) acrylate, isobutyl (meth) acrylate, isoamyl (meth) acrylate, hexyl (meth) acrylate, heptyl (meth) acrylate, 2-ethylhexyl (meth) acrylate, isoctyl (meth) acrylate, isononyl (meth) acrylate, and isodecyl (meth) acrylate.

7. The pressure-sensitive adhesion sheet [for a silicone oxide containing material] of claim 4, wherein the (meth) acrylamide represented by formula (2b) is selected from the group consisting of N,N-dimethyl (meth) acrylamide, N,N-diethyl (meth) acrylamide, N,N-dibutyl (meth) acrylamide, N-(meth) acryloylmorpholine, N-(meth) acryloylpiperidine, N-(meth) acryloylpiperidine, N-(meth) acryloylpiperidine and N-(meth) acryloyl-4-peperidone.

8. The pressure-sensitive adhesion sheet [for a silicone oxide containing material] of claim 4, wherein the monomer having an acidic group is a carboxyl-containing monomer or a phosphoric group-containing monomer.

9. A pressure-sensitive adhesion sheet comprising:

(a) a base selected from a foamed material having a water absorption rate of less than 15% by weight after having been immersed in warm water having a temperature of

40°C for 24 hours or a plastic film having a water vapor permeability of 500 g or less /m<sup>2</sup>/24 hours; and

(b) a pressure sensitive acrylic copolymer adhesive coated on said base; wherein when said base is the foamed material, the copolymer comprises:

- (1) about 60 to 94% by weight of an acrylic monomer represented by formula (1a):  $\text{CH}_2=\text{C}(\text{R}^1)\text{COOR}^2$  wherein R<sup>1</sup> is a hydrogen atom or a methyl group; and R<sup>2</sup> is an alkyl group having 4 to 14 carbon atoms;
- (2) about 5 to 40% by weight of a (meth) acrylamide represented by formula (2a):  $\text{CH}^2=\text{C}(\text{R}^3)\text{CONR}^4\text{R}^5$  wherein R<sup>3</sup> is a hydrogen atom or a methyl group; R<sup>4</sup> is a hydrogen atom or an alkyl group; and R<sup>5</sup> is an alkyl group or an organic group which is bonded to R<sup>4</sup> to form a hetero ring together with a N atom; and
- (3) about 1 to 10% by weight of a monomer having an acidic group each based on the total content of components (1), (2) and (3), and

when said base is the plastic film, the copolymer comprises:

- (1) about 60 to 95% by weight of an acrylic monomer represented by formula (1b):  $\text{CH}_2=\text{C}(\text{R}^1)\text{COOR}^2$  wherein R<sup>1</sup> is a hydrogen atom or a methyl group and R<sup>2</sup> is an alkyl group having 4 to 12 carbon atoms;
- (2) about 5 to 40% by weight of a N, N-disubstituted (meth) acrylamide represented by formula (2b):  $\text{CH}_2=\text{C}(\text{R}^3)\text{CONR}^4\text{R}^5$  wherein R<sup>3</sup> is a hydrogen atom or a methyl group; R<sup>4</sup> and R<sup>5</sup> are alky groups or organic groups which are bonded to each other to form a hetero ring together with a N atom; and
- (3) about 0 to 10% by weight of a monomer having an acidic group, each based on the total content of components (1), (2), and (3).

10. A glass or tile article having the pressure sensitive adhesion sheet of claim 9 attached thereto.

11. An article according to Claim 10 comprising a window.
12. An article according to Claim 10 comprising a container.
13. An article according to Claim 10 comprising a picture ray tube.
14. An article according to Claim 10 comprising a liquid crystal display panel.

15. An article according to Claim 9 wherein the base has a design therein.

16. The pressure-sensitive adhesion sheet of Claim 3 wherein the monomer having an acidic group is selected from the group consisting of acrylic acid, methacrylic acid, itaconic acid, maleic acid, crotonic acid, 2-hydroxyethylacryloyl phosphate and 2-hydroxypropylacryloyl phosphate.

17. The pressure-sensitive adhesion sheet of Claim 8 wherein the monomer having an acidic

18. The pressure-sensitive adhesion sheet of Claim 9 wherein the foam base material is a material selected from the group consisting of butyl rubber, chloroprene rubber, urethane, polyethylene, acryl, epichlorohydrin rubber, and silicone rubber.

19. The pressure-sensitive adhesion sheet of Claim 9 wherein the plastic film is a material selected from the group consisting of polyester, polycarbonate, and polypropylene.

PCT/US2007/035004